

WHAT IS CLAIMED IS:

1. A method for performing a hard handoff of a call for a mobile unit operating in a packet communications network, the method comprising:

establishing a first link between a node connected to an existing radio resource serving the call and a target media gateway connected to a target radio resource for serving the call after the hard handoff;

before the hard handoff is executed, simultaneously transmitting call information from both the target radio resource and the existing radio resource to the mobile unit;

executing the hard handoff; and

after the hard handoff is executed, transmitting the call information only from the target radio resource.

2. The method of claim 1 wherein the call is a packet voice call and the first link between the node and target media gateway is for transmitting packet voice call information.

3. The method of claim 1 wherein the first link is a one-way link for transmitting call information from the node to the media gateway, the method further comprising:

establishing a second link from the node to the target media gateway after the hard handoff is executed, the second link being a two-way link for transmitting and receiving call information.

4. The method of claim 1 wherein the first link is a two-way link for transmitting and receiving call information.

5. The method of claim 1 wherein the packet communications network is a Code Division Multiple Access (CDMA) network and the mobile unit is a cellular telephone.

6. The method of claim 1 wherein the node is an existing media gateway.

7. The method of claim 1 wherein node is connected to a circuit-switched voice network.

8. A call server for implementing the method of claim 1.

9. A method for performing a hard handoff in a first packet voice network, the method comprising:

detecting a potential handoff situation of a mobile unit to a target radio resource connected to the first packet voice network;

establishing a speech path to the target radio resource through a target node associated with the target radio resource;

instructing the target node to transmit speech to the mobile unit through the target radio resource before the hard handoff occurs;

performing the hard handoff.

10. The method of claim 9 wherein the target node is a target media gateway connected to a second packet voice network different from the first packet voice network.

11. The method of claim 9 wherein the target node is connected to a circuit-switched voice network.

12. The method of claim 9 further comprising:

upon completion of the hard handoff, stopping a transmission of speech to the mobile unit from a previously used radio resource.

13. The method of claim 9 further comprising:

upon completion of the hard handoff, instructing the target node to transmit and receive speech to and from the mobile unit through the target radio resource.

14. A media gateway comprising:

a control interface for receiving control information from a remote node;

first, second, and third call ports for transmitting and receiving packet call information;

a processor for performing instructions response to received control information; and

a memory for storing a plurality of instructions, wherein the instructions include:

instructions, responsive to a potential hard handoff from a

first radio resource to a second radio resource being identified, for splitting a speech path from the first call port to both the second call port and to the third call port, wherein the first call port connects to a first terminal unit, the second call port connects to a mobile unit through the first radio resource, and the third call port connects to the mobile unit through the second radio resource;

instructions, responsive to a completion of a hard handoff from the first radio resource to the second radio resource, for modifying the speech path to drop the second call port.

15. The media gateway of claim 14 wherein the instructions further include:

instructions, responsive to the completion of the hard handoff from the first radio resource to the second radio resource, for modifying the speech path between the first call port to the third call port to be a full-function speech path.

16. The media gateway of claim 15 wherein the speech path between the first call port to the third call port is a one-way speech path prior to the completion of the hard handoff, and is a two-way speech path after modification.

17. The media gateway of claim 14 wherein the first call port is connected to a packet communications voice network.

18. The media gateway of claim 15 wherein the first call port is connected to a second media gateway through the packet communications voice network.

19. The media gateway of claim 14 wherein the first call port and third call ports are both connected to a common packet communications voice network.

20. The media gateway of claim 14 wherein the instructions further include:

instructions for converting call information traveling between the first and second call ports to a packet-based format for the first call port and to a format suitable for the first radio resource for the second call port.